

Application No. 10/786,329
Amendment dated November 7, 2005
After Final Office Action of August 5, 2005

Docket No.: 20513-00590-US1
Page 2 of 8

AMENDMENTS TO THE CLAIMS

Claims 1–15 (Canceled).

16. (Currently Amended) ~~Means~~An apparatus according to claim ~~15~~25, wherein the working means for carrying out work comprises:

an anthropomorphic robot arm, a support, means for securing the robot arm and a carriage to the support for moving the support and the robot arm within the primary pipe and two sets of wheels and drive motors providing a rotational drive to at least one wheel in each set of wheels of the carriage for moving the carriage within the primary pipe.

17. (Currently Amended) ~~Means~~An apparatus according to claim 16, wherein the support comprises a structure for supporting the robot arm, two supporting shoes controlled by jacks and one locking shoe controlled by a further jack which bear-bears against opposite parts of the inner surface of the pipe.

18. (Currently Amended) ~~Means~~An apparatus according to claim ~~15~~25, wherein the means for introducing the working means for carrying out work into the pipe through ~~a component of the primary circuit~~ comprise a transfer surface for lateral movement in a horizontal plane on which there is movably mounted, in a direction in the horizontal plane, a supporting table and a lift for moving a supporting plate for the working means for carrying out work borne on the supporting table in a vertical direction, the transfer surface being secured above a horizontal surface of the first or second components of the primary circuit through which the working means for carrying out work is introduced into the primary pipe through a vertical axis opening providing access to an internal part of ~~the~~ a component of the primary circuit communicating with the inner part interior surface of the primary pipe.

Application No. 10/786,329
Amendment dated November 7, 2005
After Final Office Action of August 5, 2005

Docket No.: 20513-00590-US1
Page 3 of 8

19. (Currently Amended) ~~Means~~An apparatus according to claim ~~1525~~, wherein an access gangway communicates with the interior surface of the primary pipe.

20. (Currently Amended) ~~Means~~An apparatus according to claim ~~1525~~, wherein the first or second component through which the working means ~~for carrying out the work~~ are introduced is chosen between either a reactor vessel or a primary pump of the nuclear reactor.

21. (Currently Amended) ~~Means~~An apparatus according to claim ~~1525~~, wherein the working means ~~for carrying out the work~~ comprise means to carry out at least one operation of machining, inspecting or welding an inner part surface of the ~~joined~~ welded ~~ends~~ end parts of the new replacement section and the ends of the remaining parts of the primary pipe.

22. (Currently Amended) ~~Means~~An apparatus according to claim ~~1525~~, wherein the means for bevel welding ~~are able to weld~~ the end parts of the new replacement section to the ends of the remaining parts of the primary pipe while the supporting means support said end parts in position.

23. (Currently Amended) ~~Means~~An apparatus according to claim 16, wherein the arm incorporates an end part bearing a ~~rapid~~ an attachment device for automatic tools.

24. (Currently Amended) ~~Means~~An apparatus according to claim 16, wherein the arm has six axes of motor-driven rotational movement.

Application No. 10/786,329
Amendment dated November 7, 2005
After Final Office Action of August 5, 2005

Docket No.: 20513-00590-US1
Page 4 of 8

25. (New) In a nuclear reactor, cooled by pressurized water, an apparatus for replacing a section of a primary circuit primary pipe that interconnects first and second components of a primary circuit, the apparatus comprising:

- means for cutting out a section of the primary pipe;
- means for removing the cut primary pipe;
- means for supporting the end parts of a new replacement section in a position held by the removed pipe;
- means for bevel welding the end parts of the new replacement section of the primary pipe to confronting corresponding ends of remaining primary pipe;
- means located within the pipe for working along the entire length of the interior surface of the primary pipe; and
- means for introducing the working means selectively through one of first and second components of the primary circuit to a location within the welded replacement pipe section.